CS3110 Distributed Applications

Level: 3 **Credits: 10** **Teaching Period: 2** **Module Tutor: Mr BS Doherty**

Aims

To provide computing or closely related subject undergraduates with deeper knowledge, advanced skills and understanding to allow them to contribute to development, design, evaluation and management of distributed system applications, using appropriate technologies, techniques, and procedures and with awareness of legal and social contexts.

Content

Distributed application environment:

- Characteristics of distributed systems
- Networking, internetworking
- Synchronisation, shared data and transactions, distributed transactions
- Recovery and fault tolerance; security
- Programming in a distributed environment
- Agents, agent security
- SGML, XML

Application areas:

- CSCW, e-Business, digital rights, electronic payment
- Technology; implementing systems; infrastructure
- Risks and security considerations
- Business issues, search positioning
- Web services
- Web authoring: content management systems, AJAX, webDAV
- Illustrations: P2P, RSS, wiki, blog, MMORPG

Teaching

Lectures: 20 hours
Students will pursue directed case study investigations
Regular surgery sessions will be available

Assessment

Written exam: 100% (3 hours, May/June)
The exam will include assessment of knowledge, understanding and skills deriving from the case study investigations

Module outcomes *What the student should gain from successful completion of the module*	*Teaching/Learning Methods*	*Assessment Methods*
Knowledge and Understanding		
Design criteria for distributed applications Aware of concepts and social, commercial, legal and human environment application areas	Lectures and directed reading	Exam
Intellectual Skills		
Able to apply related tools and techniques Analyse, design, build and evaluate distributed applications Critically evaluate new and emerging techniques and information technologies for full awareness of the distributed application ramifications.	Lectures, literature study, tutorial problems, case study investigations	Exam
Professional/Subject-Specific Skills		
Evaluate and select appropriate technologies and tools Laboratory investigation of issues in distributed applications	Lectures, case study investigations	Application to exam scenarios
Transferable Skills		
Abstract significant information from unstructured sources at a level sufficient to keep up to date and communicate with computing professionals Improved research skills, making effective use of various sources.	Reading beyond lectures; case study investigations	Interpretation of exam scenarios

Learning resources

Darrel Ince, Developing distributed and e-commerce applications (2nd ed), Addison Wesley, 2004

Other study requirements to take this module

CS1240 or CS1280 Internet Computing
CS1190 Understanding Information Systems
CS2020 Software Engineering or CS2190 Software Lifecycle